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THE HERONRY
AT DALLAM TOWER

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Observations on the Heron and the Heronry at Dallam Tower.

OBSERVATIONS

ON

THE HERON

AND

The Heronry at Dallam Tower,

WESTMORLAND.

BY

THE LATE THOMAS GOUGH,

OF ARNBARROW.

KENDAL:
PRINTED BY ATKINSON AND POLLITT.
1880.

DEDICATED

To the Memory of

THE LATE

GEORGE EDWARD WILSON, ESQ.,

OF DALLAM TOWER,

BY

THE AUTHOR.

ARNBABROW, MAY, 1880.

THE HERON.

THE Heron has of late occupied such a prominent place before the lovers of practical Natural History, that I am induced to devote a little spare time to an essay on the subject. Three considerations prompted this resolve. The topic is a branch of Natural History; the Heron is a permanent resident in our district; and lastly, opportunities have been afforded me, at times, of paying attention to its habits.

But as all inquiries are more or less associated with literary antecedents, I will first of all give a general history of the Heron; and then in the latter part of my narrative furnish such local information as I have been able partly to collect on reliable authority, and partly to register from my own observations.

The earliest record to be found of this bird is in the Book of Leviticus, where "*the Heron after her kind*" is included among the unclean animals. Whether the word "*anapha*" is rightly translated Heron appears to have raised doubts. But critics have suggested so many widely different species of birds as representatives of the word, and their interpretations add so much to the uncertainty, that one may venture to allow the Heron to retain its place of restriction in the ancient record. At any rate its claim seems to be as good as that of the kite, woodcock, curlew, peacock, parrot, crane, or eagle, all of which have been brought forward in support of a more correct interpretation. A more recent annotator is of opinion that from the addition of the words ("after her kind") we may infer that it was intended for a generic name for a well-known class of birds. But what bird is an uncertainty. The only point on which any two commentators seem to agree is that it is not the Heron. The author considers that the etymology of the word is the only safe ground of interpretation. The root is "*anaph*" "to snort in anger." This seems to apply "to some irritable bird — perhaps the goose." Here then is another competitor for the post of honour, not very generally related "to a well-known class." But I am inclined to adopt the opinion of Dr. Kitto, who says, "to identify the bird by referring to the root seems to us so hopeless that we have no desire to disturb the common reading, which has as much and as little probability as any other." Let me also add that the Heron, in the passage cited, is associated with the stork and lapwing — the three being members of the *wading order* of birds. Besides, in the Septuagint version, *anapha* is rendered by Ερωδιος (Herodius), the identical word used by Aristotle about one hundred years before. And this term Ερωδιος is supposed by Suidas to have its origin by the substitution of ρ (*r*) for λ (*l*). The root then would be Ελωδιος pertaining to a marsh; and this would express, passably, Aristotle's brief account of the bird's habit, when he says "the Heron seeks lakes and rivers." In our nomenclature we use the generic term *Ardea.* Pliny's word *Ardeola* has the same signification. Here again the root of the word is undefinable. Aristotle's Ερωδιος still more transformed, has been suggested. Another interpretation is "*ardua,*" that is, the bird is inaccessible on account of its lofty flight. And, lastly, we have Ovid's metamorphic flight that the city *Ardea* was changed into this bird, the Heron!

> "Brave Turnus slain, strong Ardea but a name,
> And buried in fierce deluges of a flame;
> Her towers, that boasted once a sov'reign sway,
> The fate of fancied grandeur now betray.
> The famished Heron from the ashes springs,
> And beats the ruin with disastrous wings."*

— *Ovid's Metamorphoses, Book xiv., translated by Sir Samuel Garth, M.D.*

But as fancies such as these shed little light on the Heron's early history, I am fain to withdraw from classic lore and drop upon ground nearer our own period. In the first place,

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* "Turnusque cadit: cadit Ardea, Turno
Sospite dicta potens, quam postquam barbarus ensis
Abstulit, et tepida patuerunt tecta favilla;
Congerie è media tum primum cognita præpes
Subvolat: et cineres plausis everberat alis.
Et sonus, et macies, et pallor, et omnia captam
Quæ deceant urbem; nomen quoque mansit in illa
Urbis; et ipsa suis deplangitur Ardea pennis."

— *Ovidii Metamorph, Lib. xiv,*

we can scarcely consult any work on ornithology without finding in connection with this bird the mention of a bygone pastime. That is *falconry* — in which the Heron held an eminent position. As a proof of the frequency and popularity of the sport, it may suffice to quote a proverb founded upon the well-known and distinctive appearances of the pursuer and pursued. "Not to know the hawk from the hearonshaw" was an old proverb, founded originally upon this diversion. But time and disuse of the sport changed a word. Hence, of a stupid, unobservant man it was said, "He does not know a hawk from a handsaw," a misnomer calculated to obscure the force of a common saying of old, though both the primitive and modern versions convey the same severe reproof to a modern observer.

The compound names Hearonshaw and Hearonsew were applied to the bird more frequently than was the simple one Heron. At the "*intronization* of George Nevill, Archbishop of York, in the reign of Edward IV.," we find that in the *goodly provision for the same* were four hundred Hearonshaws. And in the *Regulations of the Household of the fifth Earl of Northumberland*, in 1512, *Hearonsewys* are entered at twelve pence each, the same price as *fesannts* (pheasants), while woodcocks were a penny, or three-halfpence each, partridges twopence, snipe threepence a dozen. A crane was the most expensive delicacy, the cost being sixteen pence. Teylles (*i. e.* teals) were "not to be bought, except no other could be got." The price of this little duck was one penny. We here learn how much the Heron was esteemed as food — a delicacy, indeed, at the tables of the nobility. But every man to his taste. I once tried to eat a piece of Heron roasted, but, though the bird was fresh, the smell alone, to say nothing of the nauseous taste, was most repulsive. Give me the despised little teal, instead of the exalted Hearonshaw.

Our provincial names of the Heron prove the familiarity which the bird has always enjoyed in this district. Long ago I was accustomed to the word Hearonsaw, though now almost out of use. We still hear of a Jammie, a Jammie Langneck, a Jammie Langlegs, a Joney Croney, and a Crane. The word crone still survives in the name of Croneywood, of which hereafter. The prefixes *Jammie* and *Joney* have their representatives of usage in the names of Tom Tit, Jenny Wren, Watty Wagtail, Peggy Whitethroat, and many others — a proof that our people have always been as familiar with the Heron as they are now with the birds above mentioned.

We have now to step upon zoological ground. The author who claims first attention is our countryman John Ray, a profound naturalist in his day, and a most patient observer. The Heron was placed in his aquatic, fissiped birds, which feed on fishes, frogs, and snakes, an order founded partly upon structure, and partly on habit. And under the genus Ardea he states that the species live upon fish; and in order to strike this slippery prey they are furnished with long, powerful, and acute bills; they have also very long thighs to enable them to wade more deeply into water. The toes are described as being very long, especially the hind toe, to assist the birds in standing more firmly in rivers, the middle toe being serrated on its inner margin, in order that eels and other slippery victims may be more securely held. But he considers that the most certain mark, by which Herons may be distinguished from all other birds, is the single cœcum, or commencement of the lower bowel, — an anatomical fact verified subsequently by Cuvier. Ray then briefly describes the colours and habits of the Common Heron (*Ardea cinerea major*, as he calls it). He says the bird sits and builds in trees; lives chiefly on fish and frogs, but does not refuse vegetables, as he had found, on dissection, in its stomach, *Lenticulus palustris*, the duckweed of the botanists. Of these, the most interesting statements are, the bird's power of holding slippery prey with the middle serrated toe-nail, and its habit of feeding on plants, traits which will be again noticed by and by.

Linnæus is the next author worthy of notice. The essential character of his fourth order *Grallæ* is that the birds are adapted for *wading*, the thighs being half-naked. The Heron falls into his section of "feet with four toes." To the genus Ardea is assigned a straight, somewhat sharp bill. Of the habits of *Ardea cinerea* (the Common Heron) he mentions two characteristic facts — many birds build together in trees; when they fly above the clouds a storm is indicated. Such was the description of Linnæus in his *Systema Naturæ* of 1767. This great work of the Swedish naturalist was afterwards edited by Gmelin, and re-published in 1788. Linnæus had said nothing about the Heron feeding on vegetables; but Gmelin, without any additional authority, or any mention of the source of his information, repeats Ray's statement. Speaking of the bird's flight, he says that when observed to be above the clouds it indicates a storm. During flight the legs hang down. Surely this commentator could never have seen a Heron on wing, otherwise he would not have published a statement so unprecise.

Buffon, with his usual verbosity, has a long chapter on the bird. "The Heron," he says, "may be seen taking his gloomy stand by a lake side; he contracts a consumptive condition; is obliged to support himself on his long habits of patience, and even to take up with weeds that grow upon the water." A melancholy picture indeed! Then we are told that nothing is more certain than that these birds will not be at the trouble of building a nest when they can get one made by a rook, or deserted by an owl, and already provided for them. So much for certainty.

Pennant is the next author who requires a passing notice, because he states a few facts which aid in filling up the defective parts of my selected history. In speaking of the Heron's sociable habits, he says that it builds in trees, and sometimes in high cliffs over the sea, commonly in company with many others, like rooks. At Cressi Hall, near Gosberton, in Lincolnshire, Pennant counted about eighty nests in one tree. In support of the bird's longevity he quotes Keysler's account that it may exceed sixty years. And one which had been recently taken about that time (1776) in Holland, bearing a silver plate on one leg, with an inscription that the bird had been previously struck by the Elector of Cologne's hawks in 1735, confirmed the opinion that the Heron is long lived.

It is almost unnecessary to mention the well-known work of Bewick. But I cannot omit drawing attention to his characteristic and faithful woodcut of the Heron with an eel in its mouth. The spirit and attitude of the bird are so true that the draughtsman must have drawn from nature. Another interesting part of Bewick's work is Dr. Heysham's account of the battle between the Herons and Rooks in 1775 at Dallam Tower. To this event I shall refer hereafter.

We now arrive at modern ornithological classification. The fourth order of birds is the *Grallatores*, *Waders*, or *Stilt-Walkers*. The essential characters may be stated in a few words. The legs are moderate or elongated, and the lower part of the *tibia*, (or thigh in popular language) less or more naked, and adapted for wading. This structural peculiarity is characteristic of a group of birds. And whatever differences may exist in size, or generic distinctions,, the legs partake less or more of the special stamp of the order, as you will readily perceive in such species as the dunlin, the snipe, golden plover, corncrake, curlew, bittern, and lastly in our stately long-shanked associate now under enquiry. But, satisfied with a view of these representatives of the order, let us divert our attention to the family *Ardeidæ — the Herons.* The characters are, a strong elongated bill, long legs, four toes, the anterior ones being more or less united at the base, and a long hind toe resting on the ground. This bond of relationship is tolerably comprehensive, for within its circle we find *Ardea*, *the Herons ; Ciconia*, *the Storks ; Platalea*, *the Spoonbill*, and *Ibis*. Discarding the last three, let us examine the characters of *Ardea.* A few words will suffice. The bill is as long as, or a little longer than, the head, strong and straight, or nearly so ; upper mandible channelled for about two-thirds of its length ; orbits and lore naked ; lower part of the *tibia* less or more naked ; inner margin of the middle toe nail pectinated; second and third quill feathers longest. These generic marks are so broad as to admit of being divided into three *sub-genera*. These are *Ardea* (Herons proper), *Botaurus* (Bittern), *Nycticorax* (Night Heron). Thus by narrowing our ground we arrive at the true Herons, the members of which are restricted to the sub-genus *Ardea*. Here we have the bill longer than the head; upper mandible nearly straight; hind part of the head adorned with a pendent crest; neck long and slender; characters well marked in the bird we are describing. Then the specific characters of this Common Heron *(Ardea cinerea)* may be thus stated—plumage, bluish gray; middle toe, claw included, much shorter than the tarsus.

We are now prepared to investigate the Common Heron's habits.

I know only of two Heronries in Westmorland; one at

Rydal, the other at Dallam Tower. My personal knowledge of the Rydal colony is so remote and indistinct, that I wrote to F. M. T. Jones, Esq., of Lesketh How, Ambleside, for information. He kindly sent me a letter, from which is the following extract: — "I find the Herons have not built upon Rydal for three or four years. When they did build there they built in rather old Scotch and silver firs of late years; but I am told that some twenty years ago they built in other kinds of trees, oaks especially. And when at one time they were disturbed at building time by some people living at Nab Cottage, they left the island and built in larch trees, in a plantation in the side of Loughrigg, west of the Lake. I well remember three or four nests a year within the last fifteen years, but I understand they were much more abundant about twenty years ago. The birds often come over to feed, and are seen about the rivers and the lake; but they have, I fear, altogether ceased to build there. — Lesketh How, Dec. 26, 1876.

It is much to be regretted that, according to Mr. Jones' account, the Rydal heronry was broken up by intruders, and it is probable that other vexatious disturbances have scared the inhabitants and driven them permanently from any building place in the Lake District. However, they can find a safer retreat during the breeding season in the secluded woods of Whitestock, or Dallam Tower. But, according to Dr. Heysham's account, given in Bewick's "*History of British Birds*," Dallam Tower was not always an abode of peace for the Heron.

The Doctor says — "There were two groves adjoining the park, one of which, for many years, had been resorted to by a number of Herons, which there built and bred; the other was one of the largest rookeries in the country. The two tribes lived together for a long time without any disputes. At length the trees occupied by the Herons, consisting of some very fine old oaks, were cut down in the spring of 1775, and the young brood perished by the fall of the timber." The account goes on to say that the parents immediately selected new habitations; but as the trees in their old locality were only of late growth, and not sufficiently high to secure the nests from boys, the Herons attempted a new settlement in the rookery. They met with an obstinate resistance from the rooks, many of which, as well as some of their antagonists, lost their lives. But the Herons at last succeeded, built their nests, and brought out their young.

But this was only a truce. The war was renewed in the following spring, and the Herons were again the conquerors. This interesting history concludes as follows:—"Since that time peace seems to have been agreed upon between them; the rooks have relinquished possession of that part of the grove which the Herons occupy; the Herons confine themselves to those trees they first seized upon, and the two species live together in as much harmony as they did before the quarrel."

I am able to supply a little additional information to the above account. The primitive dwelling-place of the Herons was to the east side of the Tower, in a cluster of trees between the carriage drive and the river Bela, near the road side leading from Milnthorpe to Beetham. The locality still bears a name commemorative of the fact. There we have an interesting historical relic in *Croneywood* (or *Cronewood?*) The rookery to which the Herons removed, being on the south-west side of the Tower, is at a considerable distance. Their choice fell upon a row of tall firs. Age and repeated storms brought these favourite dwellings to the ground. But, as the place had been won by warfare, it was not to be forsaken. The only change made by the Herons was to select other suitable trees adjoining the former old row. There they lived long in peace with their sable neighbours. But about ten years ago they were on the verge of another feud. A pair of these long-necked adventurers attempted to establish a new colony two hundred yards eastward of their present settlement. The rooks would not allow such an intrusion. And the result was that both parties evinced the same pugilistic spirit as in 1775. In this second contest they were unequally matched. The two Herons built and rebuilt their nests, which were defended with great bravery. But they received no aid from the members of their own colony. The black tribe, however, mustered in strong force, and in 1866, in the end, drove back the intruders to their own habitation. From that time to the present they have lived in peace and harmony.

On the 17th of April of the present year (1877), by the permission of G. E. Wilson, Esq., I visited the rookery at

Dallam Tower, to inspect the Heronry and its inhabitants. The trees occupied by the Herons are situated in the most elevated part of the wood, sloping north-westward towards the upper reach of Morecambe Bay. The nests are built in the highest trees, a few feet only below the extreme points of the uppermost branches. The trees are of three kinds, beech, ash, and elm — the first being the favourite. An elm, covered thickly to the summit with straggling ivy, was also tenanted. The colony is in close proximity, and indeed is intermingled with that of their neighbours, the rooks. In proof of the harmony, I may state that an ash contained two nests of Herons; and within six feet of these, in the same tree, there was the nest of a pair of their sable comrades. In this case my award of amicableness is to the Herons. Another good trait of character is the bird's honesty. Herons are not the marauders which Buffon would have us believe. They never occupy the rooks' nests, nor touch their sticks. They build their own nests, not flying to a distance for materials, but breaking strong twigs from trees a few yards beyond the precincts of the Heronry. A nest is a kind of rude, wide-spreading platform, constructed of beechen twigs, not lined with wool as generally stated, but completed with fine shoots of larch. The appearance is that of a ring dove's nest, on a large scale, more than that of a rook's. The whole platform is so shallow and open in texture that the sitting bird or eggs may be occasionally seen through the foundation. We counted twenty-seven nests. About sixty years ago the number was eleven. In course of time the increase reached thirty-two· But of late years there has been a decrease, and this change is attributed by my informant, the old gamekeeper, to the cheap gun licence — an idle liberty, fatal to the old birds during their fishing expeditions to fresh-water streams. But the Heron's wariness and quickness of vision would scarcely allow this destruction to any extent. Is it not more probable that many of the young generation move off to other colonies, or to establish new settlements?

Herons are early breeders. Indeed they may be called the earliest and latest breeders among birds. The season commences early in March, and does not close till autumn. During this period they have two or three broods. Occasionally the duties are continued so late that the young are blown from their nests, and found stalking among the trees. Whether they are left to perish, or are visited and fed by the parents till they are able to fly, is uncertain. At any rate, the whole colony quits the Heronry of Dallam Tower in September or October, and emigrates chiefly to the central parts of Fowlshaw Moss. I cannot give this as a fact from personal experience, but the old gamekeeper assures me it is so. There they reside during winter, and make daily or nightly raids upon the fish, either in the bay or upper waters. And such is the havoc made in these latter resorts during the spawning season, that it has been found needful in some cases to cover a stream, in order to guard the running trout, with wire netting for many yards. But, despite the destruction, there is plenty of fish for both man and Heron. Peace and abundance, therefore, to the latter.

During the breeding season, at least in the early part, I rarely see any Herons fishing in the bay. It would seem that they prefer round fish for their young, probably on account of the narrowness of gape and swallow. At such times a company of half-a-dozen old birds may be seen moving off from the Heronry, in an easterly direction, for a night's fishing in the brooks and tarns, especially if it be moonlight. Whether they return during the night with a supply of food and then again resort to the fishing grounds I have not been able to ascertain. But as this feathered fisherman has to bear long fasting, perhaps the inmates of the cradle may be subjected to this early training of similar hardships. But let me now return to the time of my visit. During the previous day there had been a violent storm; and a bird, about a fortnight old, had been blown out of its nest. This specimen, along with a broken egg, on the ground, was brought away. They serve as memorials of my visit, and form valuable additions to the Museum. An opportunity was afforded me of examining this youngster. Length of beak, 3¾ inches; from gape, 2½ inches; from point of beak to end of tail, 16 inches; length of leg, 8 inches; of middle toe, 2¼ inches; hind toe, 1½ inch; girth of bill at base of closed mandibles, 2¼ inches; point of beak not serrated; middle toe nail not pectinated; weight, 17 ounces; contents of stomach, a water rat, and the wing covers and legs of a large water beetle (*Dyticusmarginatus*). It is worthy of notice that there was not the least appearance of the inner margins of the middle toe nails being serrated, as in the adult. They are obliquely falcated outwardly, roundish, and perfectly smooth. This absence of pectination in the young Heron's toe, made me desirous of seeing what was the condition of that member in a Goatsucker's about the same age. Accordingly I was supplied by a gamekeeper with two young ones, partially feathered, from the nest, on August 23rd, 1877. The inner margin of the middle toe nail was not in the least serrated; but the margin was not so polished as that of the Heron's toe. There was a jagged membrane, very fragile, which certainly appeared to be the pectinated edge in a stage of development.* Then, as regards the contents of the stomach, there was not any trace of vegetable matter. And it becomes a question whether or not the duckweed, observed by Ray in his dissection, might have been conveyed accidentally along with fish or water beetles; and whether the authors, who have repeated the same statement, may have given it upon his authority alone. But this suggestion is offered only to invite further inquiry. The water rat is evidently a favourite food. I have met with it before in the adult's stomach; and when we find that young Herons are fed with the same, we may conclude that this aquatic quadruped is a choice tit-bit. Mr. Waterton was right when he lamented having filled up a range of fish-ponds through the intervening banks of which the water rats made regular passages. Had he then known as much of the Heron's valuable services as he did afterwards, no such change would have been made. Draining the ponds did not seem to lessen the number of rats. But soon after the Herons settled to breed at Walton Hall the rats became extremely scarce, and the old naturalist rarely saw "one in the place, where he formerly observed numbers sitting on the stones at the mouth of their holes as soon as the sun had gone down below the horizon."

The shallowness of a Heron's nest exposes the young to the risk of being blown out. But the danger is increased by an adventurous habit of the inmates. Arrived at an age to look around they stand erect in the nest; but, not being very stable, they are as likely to be dislodged by a rocking of the tree as by a sudden gust of wind. Then the loose open texture of the nest must expose the egg to great variations of temperature, especially during the cold winds of March. Two theoretical suggestions have occurred to me: — Either the temperature of the sitting parents is very high, or the young can be developed in, and finally excluded from, the egg under a lower degree of heat than is generally required. Both phenomena may contribute to a successful issue. What may be the temperature of the Heron I have no record. But we know that the mean temperature of birds is 108° Far. And we know also, from the experiments of Dr. W. F. Edwards, that the temperature of these creatures varies with that of the seasons. Sparrows, for instance, recently taken at different seasons of the year, exhibit great differences. In February the mean temperature was 105°; in April 108°; and in July 111°. The rise of animal heat was proportionate to the rise of atmospheric temperature. Had we sufficient data, probably we might be able to explain many individual peculiarities.

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* I was not aware at the time that this absence of pectination in the young Goatsucker's middle toe had been observed by Macgillivray.

The Heron's geographical distribution is extensive — its northern range including, among others, Iceland, Greenland, and Siberia; its more genial quarters being represented by such countries as Madeira, Japan, and the Cape. Such different climatic conditions will necessarily subject the species to great variations of temperature, food, and selection of breeding localities. According to Mr. Layard, Herons are abundant throughout the South of Africa: "They breed on the Cape Flats, placing their nests in company on tufts of grass and rushes, surrounded with water." In Great Britain their choice breeding places are undoubtedly in trees. I can find only two instances where they build on steep rocks near the coast. These are, according to Yarrell, South Stack Lighthouse, near Holyhead, and the Great Ormes Head. Colonel Montagu, a most careful observer, "saw a Heronry on a small island in a lake in the north of Scotland, whereon there was only one scrubby oak tree, which not being sufficient to contain all the nests, many were placed on the ground."

The Heron's appetite is voracious and digestion quick, so that the two functions demand frequent relays of food. Probably the assimilation may be equally rapid, and the material quickly turned into blood. This power may produce the consequent conditions of sustaining nervous energy and maintaining heat — functions much needed, by young and old, in times of scarcity and long fasting. But I cannot agree with Buffon's notion of wretchedness. No doubt, in severe cold, this feathered fisherman has to endure great hardship. Recollection carries me back to the severe winter of 1813-14. One morning a Heron was seen sitting asleep, with its head under a wing, on a wall by the river side near Sandes Close. The poor creature was, of course, quickly shot. I had an opportunity of handling the bird, and was surprised with its lightness, wondering how sufficient flight had enabled it to reach the fatal place, no account being made of the difference between fat and muscle. On another occasion I received two Herons which were killed at one shot while standing together on the river side in a severe frost. And still later, for a few years in succession, it was my privilege to watch a Heron take its stand daily by the margin of a stream. This had been its habit, according to information, for many previous winters. The long patient watching, and its crest and pectoral plumes fluttering in a storm, certainly gave an appearance of wretchedness; especially to me looking out, as I was, through the window of a warm sitting-room. But then came this consolation. We cannot estimate the misery or happiness of these lowly creatures, in their ordinary habits, by any measure of our own condition or feelings. They are endowed with structures and instincts fitted to their rank and appointments in creation. More deaths may not be inflicted upon their community by severity of season than have befallen man, with all his reason and precaution, in exploring those dreary ice-bound regions within the Arctic circle. I am inclined to conclude, therefore, that, under the severest trials, a greater number of Herons perish by the gun than from privation alone. At any rate, it has never been my lot to meet with an adult bird found dead.

When Herons visit any part of the bay their behaviour is sociable and peaceful towards the gulls.* During these frequent transits to and fro, I have looked for any peculiar flight which might forebode a coming storm; but of such fore-knowledge there has been no evidence. The result of my observations is that the altitude of flight seems to be regulated according to the distance of the bird's intended fishing ground. If the place selected be near, then the flight is low and sluggish at a few yards above the surface; if it be lower down the bay, the flight is proportionately higher; and if the journey is to be to a distant spot, an elevated and a more vigorous and rapid flight indicates the intention, and leads you to such conclusion. But I think that these different altitudes are not indicative of a storm. A question then occurs: — Have any authors, who describe a flight above the clouds as indicative of a storm, witnessed the fact? Or has the statement been transmitted to each other as a literary legacy — the sole authority being a well-known passage in Virgil's Georgics? —

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* This remark requires being qualified. If the fishing ground is fruitful sport goes on in harmony; but, if fish are scarce, chase is given to the successful fishermen by a pursuer (a lesser black-backed gull), which makes the Heron drop its game, and catches it in its fall.

> "Ere the rising winds begin to roar,
> . . . .
> When watchful Herons leave their watery stand,
> And mounting upward with erected flight,
> Gain on the skies, and soar above the sight." *

The Heron occasionally fishes alone, more usually with associates. At times we have one in the channel, a few hundred feet from a window. Keep out of sight, and see a set of interesting movements. The bird wades cautiously and on the alert, with outstretched neck and lowered head, each step being taken by a foot drawn gently out of the water and as quietly replaced in advance. Occasionally the wader steps unexpectedly into a deep hole, but there is no flurry. The misfortune causes a walk to be quietly changed into a sort of swimming, not in the ordinary palmiped way, with legs behind, but by paddling deep in the water till the feet again touch firm sand. By gentle movements, in shallow water, the Heron is often enabled to strike and secure a flook at once. If the fish is missed a sharp look-out is kept for its line of escape. If the flook rests again at a short distance a stealthy step is made in that direction. But should the distance be beyond reach of the bird's vision, a few flaps of the wings are tried in the eagerness of pursuit. I have seen a Heron, when wading, make a sudden

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* "Notasque paludes
Deserit, atque supra volat Ardea nubes."

stamp and stand still. The foot, no doubt, was upon a flook, and the pectinated middle toe nail prevented or retarded the victim's escape. The old zoologists affirmed that this is its legitimate employment. Modern ornithologists, however, say the use of this shallow comb on the inner edge of the middle toe nail is uncertain. The incident, witnessed by myself, is stated with due deference to the latter opinion. I am by no means assured in my own mind that this is the design, because here is only a rare instance of its practical application observed in one species; whereas the pectinated toe belongs to *a group* of the *Ardeadæ*, of whose specific and retired habits we know little, or nothing. During the neap tides in autumn you may often see a company of Herons waiting patiently in the channel for the gentle flow. Erect upon their legs, and with the heads settled on the upper parts of their backs, they resemble, at a distance, a row of little children. And I confess that a field-glass has been required to convince my senile eyes that the troop did not consist of small boys in peril. They were my old friends, the happy feathered fishermen, patiently expecting to have a bountiful haul of the finny tribe.

On a calm, sunny day in September, I think that Nature does not offer us a more joyous sight than a horde of Herons assembled on a dry sand-bank and waiting for the tide. The attitudes are so various. From a distance, you will see some standing erect and formal, like so many stumpy clothed walking-sticks; others are stalking in different directions, apparently impatient for the delayed event; some, in the height of enjoyment, are exposing their breasts and out-spread wings to the genial warmth of an autumnal sun; while a few, like geese, may be seen sitting with the legs beneath their bodies, and with necks elegantly arched. The one engrossing object of hope is the coming tide. And the whole group is, indeed, Nature's own picture of a "A Happy Family."

The mention of this last attitude leads me back to the Heron's posture during incubation. There are three popular notions, each having its believers and supporters. First, the legs are pushed through the foundation of the nest; secondly, they hang over each side, in other words, the bird sits astride the nest; thirdly, the legs are extended backwards over the nest's edge, and horizontally in a line with the tail. Mr.

Waterton combatted the second, and supported another, that Herons, like other birds, sit on their nests with the legs under them. He had a Heronry in his park, and it would have been more satisfactory had he applied his telescope to the nests and their inhabitants, than to have entered upon any explanation from analogy of a posture not seen. However, the question is set at rest, for a "binocular" has proved before the eyes of Mr. Harry Arnold, in the Heronry of Dallam Tower, the undoubtable fact, that Herons sit on their nests with the legs under their bodies. One more word about these legs. When a Heron rises from the ground, and for a short distance, the legs hang down, as stated by Gmelin, and well delineated in Morris' history of British birds. But so soon as the bird has acquired a settled flight the legs are extended backwards, horizontally, giving an appearance of length to the tail, the equipoise of the body being also adjusted by the retracted head and neck.

On the 12th of July I again visited the Heronry. The majority of the second brood had flown, but the inmates of one nest, at least, remained. The parents were evidently coaxing and urging them to quit. I had no idea that any company of British birds were capable of uttering such an outburst of clamour and discord. The screams and yells, in various pitches of voice, were so loud and hideous that I was reminded of the account given by Mr. Jones:—"All kinds of noises are made by the birds, young or old or both, like a lot of wild beasts."

Sept. 5.—Another visit to the Heronry. Not an inmate was to be seen or heard. Neither are any, but rarely, now seen in the bay. Occasionally the clang of one may be heard late in the evening, or at early morn. I conclude, therefore, that the breeding season is at an end. The majority are, probably, off to the upper "becks and runners," patiently watching to capture the earliest fore-runners of trout on their way to the favourite spawning beds.

All that remains for me to add is—adieu to the Herons. May they, for years to come, enjoy many peaceable returns in spring to their snug and safe retreat, the ancient Heronry of Dallam Tower.

T. GOUGH.

Sept. 7th, 1877.

Sept. 8, 1877, 8 a.m. — Calm and sunny. Three Herons in the channel are busy catching flooks.

Oct. 9. — For a few days past four Herons have visited one part of the channel, where they have remained several hours. The attraction was evidently an influx of flooks, which one might easily see them capturing. This morning there is a beautiful sight in the bright sunlight, *i.e.*, seventeen Herons, of different sizes and shades of colour, busy fishing. The destruction of flooks must be excessive according to the present rate of capture. Did the four adventurers acquaint their fraternity, by any means, that there was such a nice piece of water for a morning's fishing?

In some years the Herons return to the Heronry early. In 1879 this happened on February 23rd.